

## **IWFM Related Activities**

**(IWFM Users Group Meeting – October 28, 2008)**

1. CalSim 3.0 – IWFM linkage through IWFM Demand Calculator (IDC) and the groundwater DLL
2. Long term drought scenarios (10, 20, 30, 60 year droughts with 30%, 50% and 70% reductions in precipitation and surface water deliveries with constant land-use acreages) with C2VSIM. One paper is submitted to JAWRA, several conference papers have been presented.
3. Long term drought scenarios (those mentioned in item 2) with crop acreages computed dynamically using logit-functions; CVPM was “emulated” in C2VSIM. At least one paper will be submitted for publication.
4. Joint projects with USGS to compare the new Modflow Farm Process with IWFM root zone module both at theoretical and application (C2VSIM vs CVHM, and a hypothetical application) levels. Currently, finalizing two papers to submit for publication.
5. Development of IWFM 4.0 (expected to be released to public by mid 2009)
  - Root zone runoff processes simulated at element level instead of subregional level
  - Modified root zone and vadose zone moisture routing (conservation equations are solved implicitly, vadose zone is coupled with groundwater)
  - Modified efficiency coefficients (got rid of the parameter irrigation efficiency; introduced return flow fraction, re-use fraction and leaching fraction as fractions of applied water)
  - Rice and refuge ponding/drainage operations are simulated explicitly
  - Crop characteristics are no longer averaged over each subregion; each crop is simulated separately
  - Progress towards object-oriented programming approach and better modularization
6. Continue the development of the IWFM GUI